



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

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NOV 17 1987

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: LM-2219, Difethialone
TOX Chem No.: 114AAB

FROM: Ray Landolt
Review Section I, Toxicology Branch
Hazard Evaluation Division (TS-769C) *RLD 11/16/87*

TO: William Miller, PM 16
Insecticide-Rodenticide Branch
Registration Division (TS-767C)

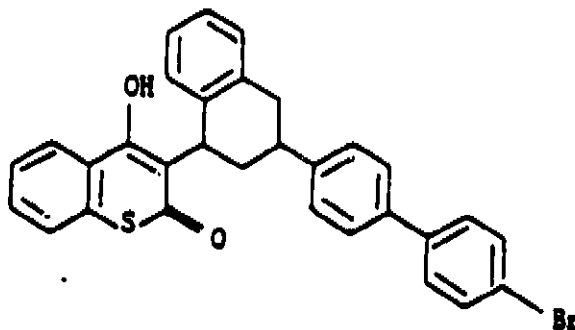
THRU: R. Bruce Jaeger, Section Head
Review Section I, Toxicology Branch
Hazard Evaluation Division (TS-769C) *RB 11/16/87*
WJM 11-16-87

Registrant: Chempar, Division of Lipha Chemicals

EPA Experimental Use Permit File Symbol: 7173-EUP-O

Action Requested: Review of acute toxicity studies submitted
on the technical material and the pelleted
use formulation in support of the registration
of a new anticoagulant rodenticide identified as

((bromo-4'-(biphenyl-1-1')-yl-4)-3-tetrahydro-1,2,3,4-
naphthyl-1)-3-hydrox-4-2H-1-benzothiopyran-one-2



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Use Restrictions: For control of Norway rats, Roof rats and House mice.

Urban Areas: In and around the periphery of homes, industrial, commercial and public buildings. In and around transport vehicles (ships, trains and aircraft) and related port or terminal buildings.

Nonurban Areas: May be used inside homes and agricultural buildings.

Treated baits must be placed in tamper-proof bait boxes or in locations not accessible to children, pets, domestic animals or wildlife. Do not place bait in areas where there is a possibility of contaminating food or surfaces that come in contact with food.

Recommendations:

1. Residue Chemistry should determine whether the treatment areas recommended on the label of this rodenticide constitute a food or nonfood use.
2. Pellet formulation - The acute oral and dermal toxicity studies, the skin irritation study and the dermal sensitization studies are acceptable. The eye irritation study is deficient
3. Technical formulation - The purity of the test material used in the acute toxicity studies and the skin and eye irritation studies must be identified.
4. Data must be submitted on test animals (rodent and non rodent) in support the Note to Physician paragraph on the LM-2219 pellet label for treatment from ingesting difethialone.

DATA EVALUATION REPORT

Study: Acute Oral Toxicity - Mice

Laboratory: Huntingdon Research Center
for Chempar Products

Date: August 22, 1986

Study Number: 86612D/LPA 2/AC

MRID Number: 402689-04

Material Tested: LM-2219, Difethialone - Technical

Animals: CD-1 mice from Charles River Breeding Lab

Methods: The test material was administered in a PEG-300-water solution by gavage in a volume of 10 mL/kg to three groups of five male and five female fasted mice per group at 1.1, 1.3 and 1.6 mg/kg then observed for 21 days. The vehicle control consisted of 5 male and 5 female mice. All animals were fasted prior to treatment and weighed between 17 and 25 grams.

Results: LD₅₀ 1.29 (\pm 0.056) mg/kg for males and females combined.

Signs of Toxicity - include piloerection, hunched posture, abnormal gait, lethargy, decreased respiration, pallor of extremities, retina darkened and bruising of torso. Death occurred between day 4 and 16 for the mid and high dosage levels. No deaths reported for the 1.1 mg/kg level. A normal body weight gain was observed for the survivors of the study.

Necropsy - Hemorrhage was observed in the thoracic and abdominal cavities. The liver, spleen, and kidneys were pale in appearance.

Toxicity Category: I

Core Rating: Supplementary

Repairability: The purity of the test material was not reported.